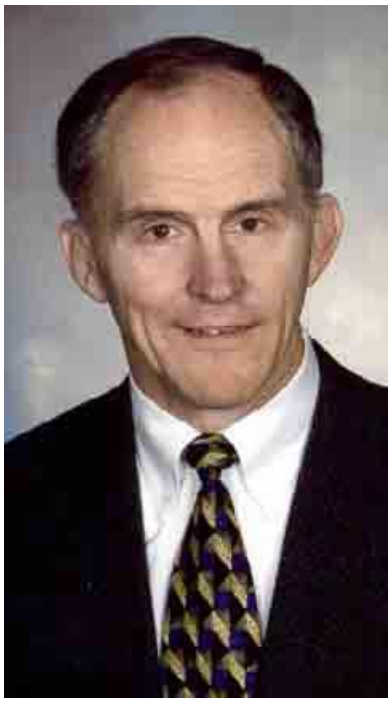
Hanford Reach
Hanford Site Employee News
August 12, 2002

BACKPACK BASICS: Fluor Community Involvement Team members worked on their “off” Friday to fill nearly half of the 575 backpacks being donated to the Fluor Worldwide Volunteer Project Backpack Basics. More than 20 employees of Fluor Hanford, Fluor Federal Services, Day and Zimmermann Protection Technology Hanford and Lockheed Martin Information Technology, as well as friends and family, sorted pencils, glue, spiral notebooks, folders and crayons to help fill backpacks so kids who can’t afford them can start school with new supplies. Supplies will be collected through Aug.15 in the 2420 Stevens Center lobby.

Amerine joins CH2M HILL Hanford Group



David Amerine, an executive with 30 years of management experience in the nuclear services industry, has accepted an offer from CH2M HILL Hanford Group, Inc. to join the company as executive vice president and deputy general manager. Amerine will join CH2M HILL on Aug. 19.

"We are pleased to welcome David to CH2M HILL Hanford Group," said President and General Manager Ed Aromi. "With his experience, record of success and proven leadership, he rounds out the management team we have been putting together to move forward in accomplishing our mission of accelerated cleanup of the Hanford tank wastes."

Amerine comes to CH2M HILL Hanford Group from Westinghouse Savannah River Company, the Washington Group International subsidiary that manages the U.S. Department of Energy's Savannah River Site in South Carolina. Amerine has been executive vice president of Westinghouse Savannah River Company since August 2001. Prior to taking that position, he was executive vice president of the government business unit of Washington Group International.

Amerine, a U.S. Naval Academy graduate who served as an officer aboard two nuclear submarines, began his civilian nuclear services career with Westinghouse Hanford Company in the 1970s, working in management roles at the Fast Flux Test Facility.

Amerine also served from January 1990 until September 1997 in several other key management positions with the Westinghouse Savannah River Company. His accomplishments included leading a special task team to resolve a significant technical problem with the In-Tank Precipitation facility and serving as program manager of the Defense Waste Processing Facility, successfully leading the effort to recover its startup schedule. He also served as program manager of the Savannah River Replacement Tritium Facility, where he was responsible for all activities, and as deputy vice president for the High-Level Waste Management Division, a 2,500-person organization with a $500 million annual budget responsible for processing 35 million gallons of radioactive waste into a stable form of glass and cement.

Aromi said Amerine's experience working at two DOE sites with tanks holding the majority of the nation's radioactive defense production wastes will make him particularly valuable to CH2M HILL.

In the 1980s, Amerine worked in the commercial nuclear industry for Centerior Energy as director of its nuclear services department in Independence, Ohio; Toledo Edison as assistant vice president for nuclear power at the Davis-Besse Nuclear Power Station near Port Clinton, Ohio, for the recovery and restart of that nuclear station; and Combustion Engineering, Inc. as the site manager of Palo Verde Nuclear Generating Station near Phoenix, Ariz. He joined Washington Group International in January 2000 after serving as vice president of engineering and services at the Northeast Utilities Millstone Station in Waterford, Conn., for that recovery and restart.

Continued on page 3.

Amerine joins CH2M HILL Hanford Group, cont.

In addition to a bachelor of science in nuclear physics and mathematics from the Naval Academy, Amerine received a master's degree in management science from the U.S. Naval Postgraduate School and a master's in business administration from the Harvard Business School Advanced Management Program.

Aromi said Amerine joins a team of senior managers assembled to allow CH2M HILL to move forward in its mission of accelerating tank waste cleanup at Hanford.

Aromi came to CH2M HILL Hanford Group in August 2001 as executive vice president and chief operating officer and was appointed president and general manager in March 2002. Before joining CH2M HILL, Aromi had most recently served as president and general manager of Duratek Federal Services and also as vice president of Fluor Hanford's Waste Management Project. Dale Allen, senior vice president of Operations, has been serving as acting deputy general manager. Allen has nearly four decades of managerial and technical experience, including serving as the contractor site manager of DOE's Y-12 Plant, general manger of the Portsmouth (Ohio) Gasseous Diffusion Plant, and serving as an engineering officer in the United States Navy.

John McDonald, vice president of Operations, came to the company in September 2001 from his role as plant manager of the Cooper Nuclear Station in Nebraska. John Fulton, senior vice president of Environment, Safety, Health and Quality, joined the company in October 2001 after serving as vice president for Nuclear Operations with Kaiser-Hill at the DOE Rocky Flats Site. Joel Eacker, vice president of projects, joined CH2M HILL Hanford Group last February from his former position as president of Duratek Technical Services at Hanford.

In November 2001, a new CH2M HILL Hanford Group organization called Mission Analysis and Technology Integration was created to help the DOE Office of River Protection reach its accelerated cleanup goals. Ryan Dodd is leading the organization after several years of experience in managing tank-farm projects and operations initiatives.

David Lowe, chief engineer, came to CH2M HILL Hanford Group in April 2001 from the Rocky Flats Site, where he had served as the DOE assistant manager for Engineering and acting deputy site manager. Prior to Rocky Flats, Lowe had served as assistant director for Process Engineering with the Defense Nuclear Facilities Safety Board. Pat Hickerson, vice president of Human Resources, Communications and Community Programs, joined the company in May 2001 and is a retired Army major general. Dan Cartmell, vice president of Business Services and chief financial officer, joined the company last April after working at the Hanford Site for more than 20 years. Stan Bensussen, general counsel since June 2000, was general counsel for Kaiser-Hill at Rocky Flats prior to joining CH2M HILL.

"In the past year, we have organized CH2M HILL Hanford Group to meet the demands of accelerated tank cleanup," Aromi said. "By filling key positions with personnel who bring a breadth and depth of experience to this project, we are poised to move forward in working with our Department of Energy customer to retrieve and dispose of Hanford tank waste and close the tanks." ■

Numatec selects Engelman, Choho

Don Engelman has been named acting president of Numatec Hanford Corporation. A senior technical manager, Engelman has 25 years of management experience within the Department of Energy complex. Most of his experience has been at Hanford and much of that has been in the tank farms. His experience here began with United Nuclear.

Numatec is one of five Areva Group companies in the local area. Numatec employs more than 60 people who provide successful experiences that can be applied at Hanford. “We expose project managers to something that has worked,” Engelman said of Numatec’s French technology.

Most of Numatec’s employees are assigned to tank-farm activities with CH2M HILL Hanford Group. Tarik Choho has been named acting vice president of Numatec with responsibility for the company’s contract with CH2M HILL.

In the early ’90s, Engelman was deputy department manager of the EG&G Waste Management effort at the Idaho National Engineering and Environmental Laboratory, where he was responsible for the National Spent Nuclear Fuel Program, the National Low Level Waste Program and the Three Mile Island cleanup. For a period, Engelman also served as director of the DOE Idaho Waste Management Division with overall responsibility for waste management activities at INEEL and the West Valley site in New York.

Engelman returned to Hanford to manage the Westinghouse Hanford Interim Stabilization Program for single-shell tanks. The program was dedicated to assuring the safe storage condition of the Hanford high-level waste tanks. After the 1996 contract transition to Fluor, Engelman was director of business development for the enterprise company that is now COGEMA Engineering Corporation.

Engelman acted as deputy to the Spent Nuclear Fuel chief engineer at the K Basins and was the SNF facility engineering manager before being named president of Numatec in June.■

Public comment sought for Monument planning process

Greg Hughes, *U.S. Fish and Wildlife Service*

The U.S. Fish and Wildlife Service needs assistance from the public in developing a Comprehensive Conservation Plan and Environmental Impact Statement to guide future management of the Hanford Reach National Monument. The Monument includes 195,000 acres of the 360,000-acre Hanford Site, including the Fitzner-Eberhardt Arid Lands Ecology Reserve, the McGee Ranch-Riverlands area, Saddle Mountain, Wahluke and parts of the river corridor. The planning process will determine a long-range management vision for the Monument including resource protection and management strategies, appropriate recreational uses, support facilities and programs.

The White Bluffs area along the Columbia River is part of the Hanford Reach National Monument.

During the planning process, Fish and Wildlife will consult with tribal governments and work with other government agencies. In addition, a local Federal Planning Advisory Committee has been appointed by the Secretary of the Interior to provide recommendations. Thirteen members represent the Monument's varied interests: state, local, and tribal governments, economic, environmental, educational, scientific, academic and recreational interests as well as the general public interest.

Fish and Wildlife will use advice from the committee to develop a planning workbook that will be used to inform and involve the public. Committee meetings are open to the public and provide opportunities for comments. The next meetings are Aug. 14 and Sept. 10 at the Washington State University Tri-Cities Consolidated Information Center.

Stakeholder and public input are critical to this planning process. An open house and a series of public meetings will be held to collect comments on the public's issues, concerns and ideas for future management of the Monument. The open house will be at the Monument offices in Richland, 3250 Port of Benton Boulevard, from 5 p.m. to 8 p.m. on Aug.14.

You will be able to provide your ideas in the public scoping meetings at a series of stations organized by program areas such as wildlife and public access. The Fish and Wildlife Service will accept public comments until Oct. 12.

To receive copies of the Hanford Reach National Monument Planning Workbook or agency updates on the Monument planning process, get on the mailing list by contacting Dan Haas at (509) 371-1801 or Glenn Frederick at (503) 590-6596. You can also follow the planning process on the Fish and Wildlife Service Web site, **http://pacific. fws.gov/planning/** , or visit the Monument Web site at **http://pacific.fws.gov/hanford/**.

A notice of intent to begin the Comprehensive Conservation Plan and EIS was published in the *Federal Register* on June 12. ■

Public Meeting Schedule

You are invited to give your input on the Monument plan at one of the following public meetings:

Aug. 28
Wahluke High School
502 N. Boundary
Mattawa, WA, 6-9 pm

Sept. 5
Sea-Tac Radisson Hotel
17001 Pacific Hwy South
Seattle, WA, 6-9pm

Sept. 9
Consolidated Information Center -
WSU Tri-Cities
2770 University Dr.
Richland, WA, 4-9pm

Sept. 17
Yakima Convention Center
10 N. 8th St.
Yakima, WA, 6-9 pm

KGH reading room, WSU lab receive Fluor donations

FOR THE FAMILIES: Tom Nielsen, Kennewick General Hospital administrator, Bob Fluor, president of the Fluor Foundation and Nolan Curtis, president of the Mid-Columbia Reading Foundation, celebrate the opening of the Fluor Family Reading Room at the entrance of the new pediatrics wing of Kennewick General Hospital. The Reading Room, funded by the Fluor Foundation, features thousands of books appropriate for children from birth through early adulthood, rocking chairs where parents can read to their children, special areas for young children to independently enjoy picture books, and a comfortable area for any family member or patient to get cozy with a good book. Fluor, the Reading Foundation and KGH remind parents that the most important 20 minutes of the day is time spent reading to a child.

MONEY TO RENOVATE: A teacher explains the features of the current primary teacher education laboratory at Washington State University Tri-Cities to Bob Fluor, president of the Fluor Foundation and Judy Connell, Fluor Hanford's director of Communications and Community Programs. Looking on are John Umbarger, Fluor Hanford manager of Community Programs, Lane Rawlins, president of WSU and Larry James, dean of WSU Tri-Cities. The Fluor Foundation donated $17,500 on July 17 to remodel and expand the laboratory and provide underwriting for operational costs. Construction is expected to begin next year. The teacher education laboratory houses hands-on courses for students seeking to become elementary school teachers and offers in-service classes for local teachers who want to learn new techniques to apply in their classrooms.

Picture Pages

CONGRATULATIONS FOR SAFE WORK: Fluor Corporation Chairman and Chief Executive Officer Alan Boeckmann, right, congratulates Fluor Hanford president and Chief Executive Officer Keith Thomson, left, and Executive Vice President and Chief Operating Officer Dave Van Leuven, on achieving 5.5 million hours without anyone missing a day of work because of an injury. Boeckmann presented Fluor Corporation's Safe Work Hour Award during his mid-July visit to Fluor Hanford. The award recognizes hours accumulated between mid-December 2001 and the end of May. Since then, the company has reached the 6.4-million-safe-work-hour mark.

LMIT EARNS TWO STARS: Dave Van Leuven, Fluor Hanford executive vice president and chief operating officer, congratulates Ted Holmes, Lockheed Martin Information Technology Safety, Security and Facilities manager, and presents LMIT with the Two Star award during the President's Zero Accident Council meeting on July 18. Fluor Hanford presents the award to contractors that have an OSHA-recordable case rate below the national standard case rate of 0.5 injuries per 200,000 hours worked.

WESF achieves four-year safe work record

Karen Welsh, *Fluor Hanford*

The Waste Encapsulation and Storage Facility recently passed the four-year mark in its record of safe work since the last injury to be classified as a “Days Away From Work” case.

WESF, managed by Fluor Hanford’s Waste Management Project, adjoins the deactivated B Plant in the 200 East Area. The facility went into operation in 1974 to convert solutions of radioactive cesium and strontium into solid compounds. These solids were then encapsulated in double-shell capsules and stored in water-filled pools. Today, WESF stores 1,936 cesium and strontium capsules containing approximately a third of the total radioactivity of the Hanford Site’s waste. The facility continues to provide safe storage until the capsules can be removed.

“Our facility is proud of this long-standing safety record,” said WESF facility manger Brian Oldfield. “It’s meaningful because this was accomplished during a period when significant, difficult and sometimes hazardous work was being performed. Examples of this include hot-cell cleanout that involved lots of manipulator changes and time spent decontaminating those manipulators, a large electrical upgrade project that required numerous wire pulls, and a project that accomplished decontamination of many areas within WESF.”

A WESF worker prepares to remove a hot-cell manipulator. Careful planning and execution are necessary to ensure the safe performance of this work.

Oldfield said that reaching four years without a lost workday demonstrates two things: “First, that we have a system in place that allows us to perform work safely,” he said. “And, secondly, that WESF personnel have made safety a personal value that they take very seriously.”

“The folks at WESF have much to be proud of, not the least of which is their impressive safety performance,” said Mike Clayton, safety activity manager for the Waste Management Project. “Their dedication, hard work and commitment to making WESF a safer and better place to work made this accomplishment possible. I have no doubt that WESF’s focus on day-to-day continuous improvement will continue to produce impressive safety results. In a nutshell, the Waste Management Project ESH&Q policy is ‘Do Work Safely.’ The team at WESF puts that policy into practice every day.” ■

PNNL finds way to anchor metals to metal oxides

Method could improve catalysts and quicken computer 'boot-up'

Staci Maloof, *Pacific Northwest National Laboratory*

A newly patented way to deposit metal atoms on very thin oxide layers may help next-generation computers boot up instantly, making entire memories immediately available for use. The technique also may help fabricate less expensive catalysts for chemical reactions and lead to better nanotechnology devices and ceramic-to-metal seals.

Pacific Northwest National Laboratory scientist Scott Chambers devised a method to create a continuous thin film of metal layered upon oxide using a special sapphire compound.

The method, described in the Aug. 2 issue of *Science*, anchors ultrathin metallic layers to metal oxides by using a chemical reaction discovered at the Pacific Northwest National Laboratory and understood and generalized by theoretical scientists at Sandia National Laboratories in Albuquerque, N.M.

The inexpensive trick bypasses the hurdle created when metal atoms cluster together into three-dimensional islands when deposited on oxide surfaces. These ultrasmall islands of metal — similar to water beads on a waxed car — produce discontinuous, noncrystalline metal films. The new smooth interfaces achieve crystallinity by only a few atomic layers and should also produce greater durability in electronic devices.

The findings may have the most immediate bearing on magnetic tunnel junctions, slated for use in magnetoresistive random access memory, or MRAM. MRAM will allow computers to store information in a nonvolatile fashion, meaning that the information is not lost when the computer is turned off. As a result, MRAM promises a day when computers would boot up instantly once turned on, rather than slowly retrieving information during the boot-up stage. Major corporations have begun developing MRAM modules in hopes of generating robust nonvolatile memory in the next few years.

Storage environment

In a magnetic tunnel junction, an ultrathin layer of insulator, typically aluminum oxide with a thickness of less than one nanometer, is sandwiched between thin layers of magnetic metal such as cobalt or nickel-iron. Current flows through the device and the magnetic orientation of the two metal layers can be switched, resulting in different values of the tunneling current, thereby creating an environment in which "bits" of computer memory can be stored.

Yet difficulties in growing an atomically flat, ultrathin film of metal on top of any insulator material have been well documented for years. In order to achieve ferromagnetism, thick layers of the top metal must be made. The new discovery should allow for much thinner layers of metal and lower currents needed to switch the direction of the magnetic field.

Continued on page 10.

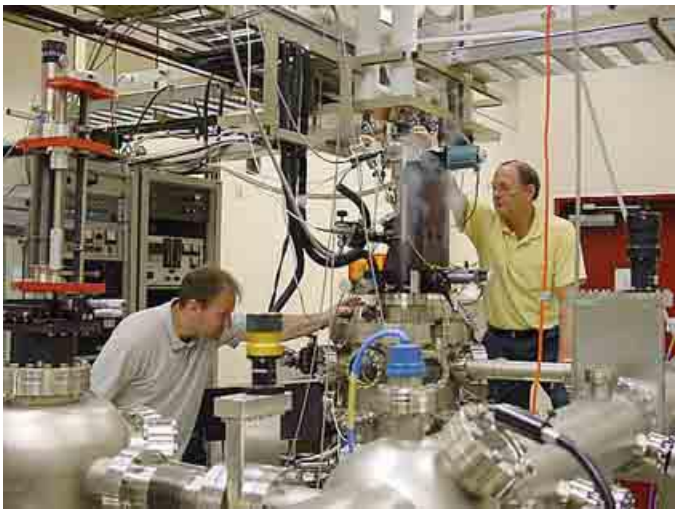
PNNL finds way to anchor metals to metal oxides, cont.

Catalysts are involved in approximately two-thirds of the gross domestic product of the United States, particularly in the oil industry. Their wide applications allow chemists to turn one molecule into another. The new discovery should also enable the production of catalysts where the reactive metal on an oxide support is only one atomic layer thick, thereby saving considerable cost.

How it works

The new method uses a chemical reaction to embed metal atoms at scattered points within the top layer of the oxide, amounting to about one anchor for every 10 oxygen atoms in the top layer. These anchoring atoms are then able to bind other metallic atoms just above the oxide surface. The new method can use equipment already in place in chip manufacturing plants.

"Many advanced technologies rely on strong interfaces between metals and oxides," said Scott Chambers, PNNL chief scientist and lead author of the *Science* paper. "These findings are very exciting because they may provide the molecular insight industry needs to create better materials for microelectronics and sensors."



Tim Droubay (left) and Scott Chambers used a molecular beam epitaxy system to create a continuous thin film of metal layer upon metal oxide.

Chambers worked in partnership with PNNL postdoctoral scholar Tim Droubay, who helped with the experiments, and Dwight Jennison, a well-known solid-state theorist from DOE's Sandia National Laboratories. "The process Scott tested concerns growing cobalt on aluminum oxide," said Jennison. "Cobalt's interaction with the oxide is so weak that it would normally ball up when deposited. However, if the surface of the oxide is first completely hydroxylated — that is, terminated by a layer of hydrogen and oxygen atoms bound together — cobalt atoms, which hit two hydroxyl groups at once, can react to release a hydrogen gas molecule. These cobalt atoms then become oxidized themselves and end up in the top layer of the oxide, surrounded by negative ions to which they bind strongly. These are the anchors."

"For industry, a solution may be as simple as exposing the thin aluminum oxide films to a low pressure of water vapor before adding a final cobalt layer," said Chambers. The entire process may be done at room temperature, while it is often important to avoid high temperatures in manufacturing.

Jennison, who first found which chemical reactions would be energetically favorable, collaborated at Sandia with Thomas Mattsson, who has extensive experience in first principle based diffusion and reaction studies and in computing critical reaction barriers. Their theoretical first principles calculations predicted some and validated other experimental results. Some of these calculations required one of the world's fastest computers.

Notably, the calculations provided insight into what reaction is taking place, where it occurs, the energy

Continued on page 11.

PNNL finds way to anchor metals to metal oxides, cont.2

barrier for it to happen and the time it needs to be completed versus the time it takes arriving cobalt atoms to lose energy while in contact with the surface. The latter is particularly important because, if the reaction were slow, the rapidly diffusing cobalt atoms could find a growing island first.

Fast reaction

However, because hydrogen molecules are being made, the reaction can be very fast, on the order of tenths of a picosecond and well before the arriving cobalt atoms can assume the temperature of the substrate. “Otherwise the experimental result would be impossible to explain,” said Jennison. “However, here we have a wonderful joining of theory and experiment.”

While the experiment was conducted using cobalt, Jennison’s calculations predict the method also would be effective for iron and nickel, two other metals under consideration for MRAM, as well as metals such as copper, ruthenium and rhodium, the latter two having catalysis applications.

The Division of Material Science within the DOE Office of Basic Energy Sciences supported this research at PNNL.

Business inquiries on PNNL research and technologies should be directed to 1-888-375-PNNL or e-mail inquiry@pnl.gov. ■

Engineering team designs two bail-straightening devices

Paul Deichelbohrer, *Numatec Hanford*
Susan Leckband, *Numatec Hanford*

The Bail Repair Assembly in the process of straightening a lifting bail.

Working for CH2M HILL Hanford Group, engineers from Numatec, Fluor Federal Services and COGEMA Engineering designed, tested and deployed two bail-straightening devices for use in the Hanford tank farms.

Lifting bails are steel handles embedded in concrete lids, or coverblocks, that cover underground pits. The pits contain valves, pumps and other equipment used to transfer radioactive waste in and out of Hanford's tanks. To gain access to the pits, rigging is attached between the bails and cranes that are used to lift the heavy coverblocks.

More than 30 pits need to be upgraded in the coming years to prepare for retrieving tank waste for treatment. Other operations in the tank farms that involve lifting coverblocks include the pumping of liquid waste from older single-shell tanks into newer, safer double-shell tanks.

The engineering team that designed tools for straightening lifting bails on tank-farm pit coverblocks included (front row, left to right) Paul Deichelbohrer, Cary Graves, Linnea Friberg, Omar Jaka, Dale Hicks; (back row, left to right) Glen Borst, Jerry Hopkins, Nick Kranz, Tom Mackey, Mian Haq and Ron Hollenbeck. Not pictured are Bill Magruder, Lou Valle and Tom Conrads.

Some of the lifting bails were bent during previous use several years ago. Stress analysis had shown that the bails were not up to code and should not be used for lifting the heavy coverblocks until they were straightened.

Based on the engineers' designs, the Fluor Hanford West Area shops built two bail-straightening devices. One of the devices, called the Bail Repair Assembly, uses hydraulic force to straighten the bails. The other, the Cantilever Bail Straightener, was designed for use in tight spaces when other equipment is too close to the bail to use the Bail Repair Assembly.

These new tools will save time and money by allowing the use of the original bail rather than having to install new lifting devices on the coverblocks. Once each bail is straightened and successfully tested, activities that involve lifting the pit coverblock may resume.

"The successful application of these innovative devices shows how effective a team effort can be here at Hanford," said Tom Conrads, Numatec Hanford manager of Project Definition, who coordinated the effort. ■

‘Flash suits’ protect electricians on 222-S Laboratory job

Hoods, arc suits help workers safely perform high-energy electrical job

Deborah Dunn, *Fluor Hanford*

Dave Greiner, a 222-S Analytical Laboratory electrician, above, and below right, wearing an arc suit and switching hood.

A high-energy electrical job was completed safely at the Fluor Hanford-managed 222-S Analytical Laboratory July 25. Arc “flash suits” were used to provide electrical workers with primary protection from possible high-energy electric arc “flash” while the workers took current readings on exhaust-fan circuits.

The scope of work was to take multiple amperage and voltage readings from 125-horsepower exhaust-fan motor circuits while the motors were running, using various fan vane positions. The readings were used to confirm the exhaust-fan motor brake horsepower and efficiency, according to Tom Montgomery of Fluor Hanford Analytical Services Engineering.

“At the 222-S Analytical Laboratory, we have taken the Fluor values of safety, integrity, teamwork and excellence to heart,” said Gary Mickle, Fluor Hanford industrial safety representative. “This job is a great example of these values in action with the Integrated Environment, Safety and Health Management System.”

“Our first choice is always to de-energize,” said Paul Case, coordinator of the Fluor Hanford Electrical Safety Program, who was at the laboratory that day for an electrical safety presentation. “Maintenance asks Operations when they can shut off the power. But in jobs like this, where you have to measure current, the circuit has to remain energized and you need to protect the workers from electric flash by providing the right kind of personal protective equipment.”

Flame-resistant clothing is rated using a measurement of calories per centimeter squared, expressed as cal/cm^2. Case said that holding your finger in the flame of a common cigarette lighter would be roughly equivalent to an exposure of 1 cal/cm^2. The potential arc incident energy for this job was estimated at 12 cal/cm^2 18 inches from the energized parts.

Flame-resistant clothing intended for everyday wear is rated at 5-8 cal/cm^2 and is considered a secondary type of protection. These are the garments that look and feel like regular work clothes but won’t support a flame. This type of clothing will be supplied soon to Fluor Hanford electrical workers as an initiative of the Hanford Workplace Electrical Safety Board.

Continued on page 14.

‘Flash suits’ protect electricians on 222-S Laboratory job, cont.

Montgomery said the arc suits and switching hoods supplied by the lab to its three electricians for higher-energy work are rated at 31 cal/cm^2, surpassing the recommendation for the job.

“Our only option was to use the switching hoods and arc flash trousers and jackets,” Montgomery commented. “It is gratifying to have management at this facility recognize the importance of this protection by providing this clothing.”

Case said the suits offer greater resistance to higher energy levels, and block heat transfer. The insulating gloves protect the hands from both heat (leather outside) and shock (rubber inside).

Electricians Dave Greiner and Bruce Pittner of the 222-S Analytical Laboratory make safe progress on a high-energy job.

One disadvantage of the suits is discomfort in hot weather. The heavy material doesn’t breathe. Case noted that pre-job planning, a key part of ISMS, must take such circumstances into account. Job planning allowed the workers to step back between readings, close the door and open their hoods and jackets to cool off.

The electricians, Dave Greiner and Bruce Pittner, said the job reminded them of working in radiation zones while wearing full face masks and plastic anti-contamination suits.

Case recommends that all the Hanford projects keep arc flash suits on hand for maintenance jobs that can only be performed with circuits energized, and also in case of emergency. ■

Photography Services plays role in tank monitoring

Lisa Hockaday, *Lockheed Martin Information Technology*

This interior photo of single-shell Tank B-105, taken in 1988, shows the saltcake, the tank wall and the dome.

What if you could have the history of a tank at your desktop?

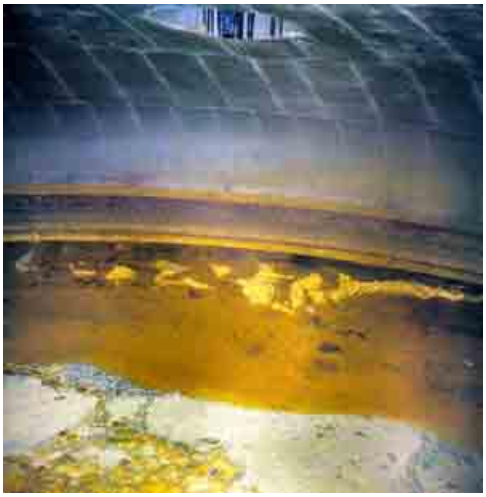
The question was prompted by an initial request from CHG subcontractor M&D Professional Services, and was not so simple to answer. After receiving a request to scan a set of negatives from a single-shell tank, Dan Ostergaard and Bonnie Compau of Lockheed Martin Information Technology's Photography Services began a five-month project to create a historical database of tank images.

From 1976 to 1994, cameras were lowered into the risers of Hanford's waste tanks to monitor the integrity of the tank structure. Using a directory for an obsolete photo library, more than 20,000 negatives were pulled to evaluate, scan and catalog. Because it wouldn't be feasible to scan all the negatives, Ostergaard used his extensive knowledge of the Hanford archives to evaluate each negative in search of artifacts, formations or anomalies that could provide information on the condition of the tank.

The negatives were then scanned at a high-quality resolution, corrected for color and density, and then organized by tank and date. Since March, Ostergaard has been sending 700-800 megabytes of photo scans weekly to M&D, and archiving the scans into the Records Management Information System, or RMIS.

This information will also be integrated with the current video footage (1995 to today) and be readily accessible in the Tank Characterization and Safety Resource Center. The scanned images offer an alternative perspective, structure the data historically and are of superior image quality.

When the project is completed this month, approximately 11,500 images will be scanned and cataloged. When asked if all that scanning ever became tedious, Ostergaard replied, "Some of the formations are really beautiful, in a way, like artwork."



This interior view of Tank S-108 was taken in 1976. It shows a riser, the concrete dome and some liquid waste.

Photographs and videos provide valuable visual documentation of key site projects of the past, present and future. To find out more about how you can use these services to professionally document, communicate and archive your project information, contact Lockheed Martin at 376-6960 for Video Production, 376-3975 for Digital Photography, 376-2345 for Graphics and Exhibits, or 376-5679 for Technical Publications. ■

PNNL technology designed to detect hidden weapons

A technology that is designed to rapidly identify hidden weapons, explosives and other contraband — even plastic, ceramic and other non-metallic weapons — through clothing is the cornerstone of a new company formed to commercialize the technology for a variety of security applications.

The technology, which uses millimeter waves to generate holographic images, was developed by the Department of Energy's Pacific Northwest National Laboratory for the Federal Aviation Administration to scan airline passengers as they pass through airport security checkpoints.

PNNL is operated for DOE by Battelle, which has licensed the technology to SafeView, Inc., a new corporation based in Menlo Park, Calif. Under terms of the licensing agreement, SafeView will establish and maintain a product development office in the Tri-Cities.

The holographic imaging system developed at Pacific Northwest National Laboratory detects all threats or contraband, including metal, plastic, liquids, drugs, and ceramic weapons, hidden under clothing.

The holographic imaging system is distinctly different from current surveillance systems that rely on metal detectors, X-ray imaging and, in some cases, strip searches. Metal detectors cannot screen for plastic or ceramic weapons, plastic explosives or other non-metallic contraband, while X-ray imaging subjects people to potentially harmful ionizing radiation.

"We believe that the imaging system has enormous potential for use in screening people at points of entry to mass transit systems including airports, subways and trains; border crossings; government installations such as courtrooms, military bases, prisons, embassies and office buildings; crowded public places such as sports arenas, concert halls and museums; and commercial buildings," said Mike Lyons, chairman of SafeView's board of directors.

"While the technology was developed to identify dangerous objects or contraband that people might bring into a facility, we believe it also could be used to protect against theft by identifying concealed items that people might try to remove from facilities, ranging from museums to nuclear plants," added Doug McMakin, a PNNL engineer who was a principal developer of the technology.

Looking much like a conventional metal detector, the system projects ultrahigh-frequency, low-powered radio waves onto the front and back of the person being screened. These waves — known as millimeter or centimeter waves because they have wavelengths of about one centimeter — penetrate clothing and bounce off the person and the items he or she may be carrying.

A sensor array captures the reflected waves and sends the information to a high-speed image-processing computer. The computer analyzes the information and produces a high-resolution, three-dimensional image from the signals that allows an operator to screen for suspicious materials.

The security scanner has its roots in a three-dimensional holograph imagery technology program that was established at PNNL in the 1970s to develop non-destructive evaluation technologies for nuclear reactors. In the mid-1980s, the FAA became interested in the technology's potential for scanning people passing through airports and began funding research in 1989. ■

CH2M HILL Hanford Group strong in local spending

Hanford tank-waste contractor CH2M HILL Hanford Group directed nearly two-thirds of its approximately $76 million in purchases of goods and services toward local businesses during the first three quarters of fiscal year 2002.

From last October through this June, CH2M HILL bought 63 percent, or approximately $48 million worth, of services and products from local businesses. The $48 million spent in the first three quarters includes contract awards, purchase orders and goods purchases going to businesses in Benton, Franklin, Yakima and Walla Walla Counties.

“We’re pleased that our efforts to direct project dollars toward local businesses have led to results above our goals,” said Ed Aromi, CH2M HILL Hanford Group president and general manager. “We will continue to seek out local businesses with the expertise to help us be successful in our work for the Department of Energy.”

CH2M HILL Hanford Group, Inc. is the Department of Energy’s Office of River Protection prime contractor with responsibility for managing Hanford’s tank farms and retrieving tank waste for treatment and disposal. ■

Help raise awareness; Volunteer for the 2002 Heart Walk

Janelle Jolley, *Pacific Northwest National Laboratory*

More than a thousand walkers are expected to come together on Saturday, Oct.12, to help in the fight against heart disease and stroke in Benton and Franklin Counties. This event will mark the 10th annual American Heart Walk, aimed at combating Washington's number-one killer — cardiovascular disease.

Tri-Cities Heart Walk chairman, Fluor Hanford President and Chief Executive Officer Keith Thomson, knows first-hand of the importance of cardiovascular research and education. As a survivor of coronary surgery, Thompson has committed himself and his organization to being an "active partner in, and with, the community" through his leadership role in the Heart Walk.

Thomson has undergone two open-heart surgeries and is sharing his story as a way of bulding community awareness about heart disease — the number-one killer of Americans today. "The willingness of local businesses and individuals who donate time and money to help educate the public and fund research is an invaluable resource in our area," Thomson said. "We are a unique community that rallies together to support community causes such as the Heart Walk."

Walkers including Fluor Hanford's John Umbarger and Karen Welsh (foreground), near the finish line of last year's Heart Walk.

Companies and individuals are encouraged to form teams to help raise funds for research and education related to heart disease. All participants are welcome. Registration for the 5-kilometer Heart Walk is at 9 a.m. at the Richland Community Center. The walk begins at 10 a.m. and will include lunch and an expanded children's area.

Red caps will be given to participants who are survivors of heart attack or heart surgery, and white caps will be provided to survivors of stroke. Tribute forms and ribbons will also be available for walkers who wish to dedicate their participation to loved ones. There will also be a 1-kilometer turnoff for people preferring a shorter route.

Sign up to participate in this event, or help support the Heart Walk financially by contacting your company representative: Fluor Hanford, Lynn Tegeler at 376-4625; Pacific Northwest National Laboratory, Katie Larson at 375-3698; Bechtel Hanford, Dale Denham at 376-8550; CH2M HILL Hanford Group, Rich Reisinger at 372-2067; Fluor Federal Services, Bill Crook at 376-0419; or the Tri-Cities office of the American Heart Association at 582-9001. ■

Can you meet the Security Ed challenge?

Controlling access to facilities is a cornerstone of our physical security program. If you work or access Property Protection Areas that are continually locked, you are responsible for anyone entering the location with you.

Take Security Ed's Challenge and complete the following sentence:

"Piggybacking" or "vouching" is allowed at most* Property Protection Areas after ensuring the individual requesting entry has_____.

A. a host
B. an escort
C. a driver's license
D. a valid security badge

(References: News article "Piggybacking," *Hanford Reach*, page 2, Dec. 10, 2001, and HNF-RD-11440 "Physical Protection of Property and Facilities.")

Do you know the answer? If so, circle the correct answer and send to Yolanda Sanchez at L4- 09. Please include your HID number. You can also send Yolanda an e-mail message, and in the subject line include "Ed's Piggyback Challenge" and your answer. Prizes will be awarded to randomly drawn correct entries. The names of prizewinners and the correct answer will appear in a future *Reach* article soon.

*Note that during periods of heightened security the practice of piggybacking/vouching may be suspended at some locations. Contact your building administrator if you have questions or need a clarification of your building-specific access control policy.

Congratulations to Betty Marin of Fluor Hanford, the winner of the July 29 Security Ed Challenge. Marin correctly chose "C - SECON 3" as the current security condition at Hanford. SECON 3 is the highest security condition that can be maintained indefinitely (reference DOE Notice 473.6). Marin won a security blanket.

Submitted By _____Hanford ID No. _____

Mailstop _____

LETTERS

Employees are invited to write letters of general interest on work-related topics. Anonymous letters will not be printed. We reserve the right to edit letters or not to accept letters for publication. Send your letters to the *Reach*, B3-30, or to *Hanford Reach on e-mail. Letters are limited to 300 words, and must include your name, company, work group and location. Opinions expressed are those of the author and not of DOE-RL, ORP or their contractors.

Well said

I really appreciate what Michael Lighty had to say in his letter last week ("Doing something about it," *Hanford Reach*, Aug. 5).

His reminders about perspective were well written and serve as an excellent reminder of how things were versus how they are now.

Thank you, Michael.

Gary Bush
Fluor Hanford

A commuter's pledge

I like to drive, and the commutes to and from work are some of the most restful times of my day. Therefore, I choose to drive within a couple of miles per hour of the posted speed limit. If you don't, that is a choice between you and law enforcement. There is nothing I can do to change your choice.

So that you may pass me by as safely as possible, I give you this pledge:

- I will not cruise in the left lanes.
- I will maintain a constant speed, and will not speed up as you start to pass.
- I will lower my high beams as you come alongside.
- On the two-lane roads, I will pull over to the "fog line" to give you a better view ahead.
- Finally, I will take the slow lane on the PUREX hill. In return, I ask that you don't tailgate, don't pass in no-passing zones and please use your signals.

Scott Moss
Fluor Hanford

CALENDAR

Donate blood at the Federal Building tomorrow

The American Red Cross will hold its bi-monthly blood drawing in room 142 of the Federal Building on Tuesday, Aug. 13. The drawing will be held between 10 a.m. and 3 p.m., with sign-in in the Federal Building lobby. Walk-ins are always welcome, but for an appointment, please call the Red Cross at (800) 787-9691.

WSU Tri-Cities orientation night set for Aug 14

Students new to the Washington State University Tri-Cities campus this fall can find all the information they need to know at an orientation night beginning at 6 p.m. on Wednesday, Aug. 14, in the East Building Auditorium. The session is designed to assist students in making the transition to WSU, provide information on campus activities and conduct campus tours. For more information, call 372-7250 or visit **http://www.tricity.wsu.edu**. Fall semester begins Aug. 26.

Legal research discussed at Technical Library

Researching legal problems can sometimes be an overwhelming experience. Let the staff at the Hanford Technical Library help you find out how to use various legal databases during the "Legal Resources" presentation from 12 to 1 p.m. on Aug. 15 in room 101R of the Consolidated Information Center on the Washington State University Tri-Cities campus. For more information contact Terrie Pettibon at 376-6807 or at terrie.pettibon@pnl.gov.

Golf fundraiser for son of Bechtel employee

The David Willingham Open will be held on Saturday, Aug. 17, at the Canyon Lakes Golf Course in Kennewick, with all proceeds going to the Bone Marrow Transplant Fund for David Willingham. The fund is administered by the National Transplant Assistance Fund, a 501(c)(3), non-profit

Calendar continued on next page.

CALENDAR continued

tax-exempt organization dedicated to providing direct assistance to the transplant community. David is the son of Bechtel National employee Crystal Willingham. Tournament format is a four-person scrambler, with a total of 36 teams. There will be one shotgun start at 1 p.m. Please arrive one hour prior to shotgun start for registration. A $60 minimum registration fee per individual includes power cart, range balls and sirloin and salmon dinner. Prizes will be awarded for first, second, third and last place (low gross), the longest drive and the closest to the pin. For more information on sponsorship and sign-ups, send e-mail to DavidsNTAF @hotmail.com or call Dawn Moore at 430-3043, Traci Wallace at 943-3129, Sheila Reed at 946-3117 or Crystal Willingham at 366-4713.

LIGO sponsors lecture Aug. 18

The Laser Interferometer Gravitational Wave Observatory, also known as LIGO, will spponsor a public lecture featuring Eric Adelberger of the University of Washington speaking on the topic: "How Many Dimensions Are There to the Universe?" The lecture will take place in the Battelle Auditorium on Sunday, Aug. 18, at 7:30 p.m. Admission is free. Details are available at **http://apex.ligo-wa.caltech.edu**.

Tri-City Young Marines seek new recruits

The Tri-City Young Marines are looking for a few good young men and women, aged 8 to 18, to join their ranks. The group will hold a parent information night at 7 p.m. on Tuesday, Aug. 20, at the Wagenaar U.S. Army Reserve Center, 1011 E. Ainsworth in Pasco. Parents, relatives or guardians are invited to come along with potential recruits to learn more about the Tri-City Young Marine program. The Young Marines is a national non-profit organization that is run mostly by former Marines, is sponsored in name by the Marine Corps League and is supported by the U.S. Marine Corps. The organization's mission is to promote the mental, moral and physical development of young Americans. For more information, contact Shanna or Larry Abbott at 946-6980 in the evenings.

Roundtable discussion to be held with DOE

The Academy of Certified Hazardous Materials Managers – Eastern Washington Chapter will hold the third scientific and professional societies roundtable discussion with the Department of Energy and its prime contractors from 7 to 8:30 p.m. on Aug. 27 in the Battelle Auditorium. A social hour from 6 to 7 p.m. will precede the roundtable discussion. Keith Klein, manager of the DOE Richland Operations Office, and Roy Schepens, manager of the DOE Office of River Protection, will lead the discussion.

CLASSES

PROTRAIN offers software classes

The following software training will be offered at PROTRAIN:

- **Primavera Project Management**

601 Planning & Scheduling w/ P-3 – Aug. 19-21
602 Resources & Cost Analysis – Sept. 23
603 Managing Project Data – Sept. 24
604 Creating Reports & Graphics –Sept. 25

- Microsoft Project 2000 ($199 per day)

MS Project Level 1 — Aug. 26
MS Project Level 2 — Aug. 27

- Crystal Reports 8 ($225 per day)

Introduction – Sept. 9
Advanced – Sept. 10

For more information or to register, call 375-0414.

Classes continued on next page.

CLASSES continued

Fiber optic training offered Aug. 28

The Volpentest HAMMER Training and Education Center will offer two sessions of a hands-on fiber optic training course at the HAMMER campus on Aug. 28. Contact Libby Sickler via e-mail or at 376-7117 for more information or to register. Provide your name, Hanford identification number, charge code and organization code to register for the training.

Technical document writing class offered

Writers and potential writers of technical documents will benefit from taking the class, "Constructing the Technical Document: Essential Strategies and Skills," offered Aug. 14-15, 8 a.m.-4:30 p.m., in the Snoqualmie Room of EESB on the Pacific Northwest National Laboratory campus. Space is limited, so register early. Cost for the class is $400. Visit: **http // workshops.pnl.gov** for more information or contact Mary Wagner at 372-4259 or at mary.wagner@pnl.gov. To register, contact Cory Rhoads at 376-7157 or at cory.rhoads@pnl.gov.

EnergX offers management assessments class

EngergX Hanford Training will offer "Performing Effective Management Assessments within an ISMS Framework" Aug. 14 and Oct. 10 at the Hanford Training Center. This eight-hour course addresses the "why's and how to's" associated with meaningful performance assessments, focusing on management self-assessments. The course is presented within an ISMS framework, and uses practical exercises to focus on assessment tool development, assessment techniques and effective communication of assessment results. This course is appropriate for senior and line management, as well as for all personnel who participate in management self-assessments. The cost is $250. The instructors are Joe Estey and Ben Geppert. To register, contact Lynn Collins at 946-9654 or at lcollins@energxhanford.com.

Defensive driving course offered Aug. 19 and 20

"55 and Alive" Defensive Driving course will be held at Kadlec Hospital Aug. 19 and 20, 5-9 p.m. in the Cascade Chinook Room. The course is intended for those 55 or older, but drivers of any age are welcome. The cost is $10. Completion of the course will allow those over 55 to obtain a discount on their auto insurance. Call Wendy at 942-2600 to register.

McCoy and Associates RCRA Seminar in September

The Volpentest HAMMER Training and Education Center is sponsoring a McCoy and Associates Resource Conservation and Recovery Act Seminar on Sept. 10, 11 and 12 at the WestCoast Hotel in Pasco. The cost of the three-day seminar is $600. Hanford Site contractor employees register via PeopleSoft. Department of Energy employees register via the DOE Office of Training and Registration. The following will be provided: McCoy's RCRA Reference, 2002 edition; McCoy's RCRA Unraveled, 2002 edition; a three-ring binder containing a set of course notes for each day and McCoy's RCRA remediation options table. For more information, contact Don Brock at 372-3910 or at donal_e_brock@rl.gov.

DSI offers REASON® Root Cause Analysis class

Decision Systems, Inc. will offer a REASON® Root Cause Analysis class Monday, Sept. 30, and Tuesday, Oct. 1, from 8 a.m. to 4 p.m. in the HAMMER Administration Building, Room 28. Cost is $800. Attendees will learn to break a problem down into essential parts, model systems formed by the parts and analyze models to identify root causes and best solutions. Register online at **www.rootcause.com/open_training.htm** or by contacting DSI at (903) 236-9973 or dsi@rootcause.com. Enrollment is limited to 25 persons. Registration deadline for the class is Sept. 20. Payment of the enrollment fee can be scheduled to accommodate budget restraints.

BRAVO

Fluor Hanford Finance honors employees

Last month, the Fluor Hanford Finance Department recognized the following employees for their outstanding contributions during the third quarter: Lore Brackensick, Charlie Hill, Valerie Gillihan, Debbie Long, Sheri Evans, Mary Slage, Sharon Morgan, Kathy Bates, Kim McDowell, Wayne Walton, Katie Harris and Heather Goldie-Baker. Each of these employees received Columbia Center gift certificate as part of their recognition.

Features continued on next page.

Regular Features

NEWSBRIEFS

PTB transfer approved for Tony Madden

Charles "Tony" Madden, an operations specialist at the K West Basins for the Spent Nuclear Fuel Project, has been approved to receive personal time bank transferred hours. Madden needs assistance while in North Carolina caring for his terminally ill father.

Any Fluor Project Hanford Team employee who would like to transfer PTB hours can do so by completing a PTB/Vacation Transfer Request form (Site Form A-6002-807) and sending it to Colleen Angel, Fluor Hanford Human Resources, at mailstop S2-45. Time must be transferred in one-hour increments.

ACTIVITIES

Tumbleweed Music Festival set for Labor Day weekend

The Three Rivers Folklife Society will present a wide variety of music and dance for the entire family's entertainment in Richland's Howard Amon Park during the Tumbleweed Music Festival on Aug. 31 and Sept. 1. Over 65 local and regional acts have been scheduled to provide free entertainment from 11 a.m. to 7 p.m. each day. The Saturday night concert features the Righteous Mothers, the Winstons, William Pint and Felicia Dale and the Emerald City Jug Band. A contra dance Sunday night features Phil and Vivian Williams with Dan Clark calling. A $5 admission will be charged for the concert and the dance. For more information, contact 943-ARTS or visit **www.3RFS.org**.

H.anford E.mployee R.ecreation O.rganization

PLEASE MAIL YOUR TICKET REQUESTS TO THE APPROPRIATE LISTED TICKET SELLER — It saves the ticket sellers' time and your tickets will be sent to you the same day. Do not combine the charge for tickets to two different events on the same check. If you do, it will be returned.

HRA — Questions about the Hanford Recreation Association should be directed to Denise Prior at 376-2258.

HERO POLICY FOR NSF CHECKS — Associated non-sufficient fund bank fees will be passed on to check issuers. HERO will not absorb the cost.

SPORTS — Monies are available in the H.E.R.O. budget for sponsoring team sports. Seventy-five percent of the team must be Fluor Hanford, CH2M HILL Hanford Group, Duratek or PTH employees and their immediate family members. Contact Flu Garza.

DISCOUNTED MOVIE TICKETS — Limit now 10 per purchase. Carmike tickets are $5 each with restrictions applying only to Sony DDS movies. Regal tickets are $5 each and applicable restrictions are identified in the *Tri-City Herald* with a star. Yakima Mercy tickets are $5 each with no restrictions. Regal and Carmike tickets are valid in Seattle and Spokane as well as the Tri-Cities. For Regal or Carmike tickets, send checks (no cash) made payable to HERO to Linda Meigs (H3-12), Linda Sheehan (T4-40), Nancy Zeuge (X3-74), Michelle Brown-Palmore (A7-51), Ginny Wallace (S7-03) or Patti Boothe (T6-04). Sunnyside Movie Theater is now offering tickets for two admissions (that means one ticket gets two people in for one show), for $9.50, no show restrictions, and these tickets are also good for Ellensburg and Walla Walla. For Yakima Mercy or Sunnyside tickets, send checks (no cash) to Nancy Zeuge (X3-74), Jim Hopfinger (S7-39) or Tricia Poland (T5-04).

WILD WAVES ENCHANTED VILLAGE — A member of the Six Flags Family, Washington State's best theme park, located in Federal Way, just got a whole lot better as 2002 brings 10 new exciting rides. Some of the rides are the new Lumberjack Falls, the new Klondike Gold Rusher roller coaster, Hook's Lagoon, a brand new interactive waterfest of fun with four new slides, new Timber Axe thrill ride, the new Hang Glider, plus much more. Tickets prices are $20. Children 2 years old and under are free (no ticket needed). Send your check (cash will not be accepted), made payable to HERO to Linda Meigs (H3-12),

H.E.R.O. continued on next page.

Employee Activities H.E.R.O. continued

Nancy Zeuge (X3-74) or Marvene McChesney (T4-61).

PENDLETON ROUND-UP TICKETS — 100 tickets are available for $13 each. The seats are located in the west bleachers section T for Saturday, Sept. 14, at 1:15 p.m. Send your check made payable to HERO to Tricia Poland (T5-04). Limit of six tickets per family (no exceptions).

FAMILY OASIS WATERSLIDES PARTY — Friday, Aug. 16, 6:30-9:30 p.m. In addition to all the waterslide fun, dinner (hotdogs, cookies, chips and pop) will be served! Tickets are now on sale for $6 person (ages 2 and under are free). For Fluor Hanford, CH2M HILL Hanford Group, Numatec, Duratek and PTH employees only. Send your check, made payable to HERO, to Linda Meigs (H3-12), Nancy Zeuge (X3-74), Cheri McGee (N2-53), Nancie Simon (R2-80), Jim Hopfinger (S7-39) or Marvene McChesney (T4-61). Ticket sales will end on Tuesday, Aug. 13, so purchase yours early!

MT. HOOD RAILROAD MURDER MYSTERY DINNER TRAIN — Saturday, Oct. 12. We will leave the Federal Building parking lot at 12 noon for our trip to Hood River, Ore. The train departs the station at 4:30 p.m. and returns at 8:30 p.m. The 1940s-era train captures the nostalgia of classic American passenger train service. Enjoy a four-course meal, stroll to the lounge car or sit back and enjoy the intimate surroundings at your own windowed booth. Enjoy the splendors of the scenic Columbia Gorge while climbing to the foothills of Mount Hood. Space is limited, so reserve your table for a sumptuous dinner and a "murderously" funny evening filled with entertainment by professional actors! The price is $100 per person, which includes your round-trip bus ride and dinner. $25 per person (non-refundable) is due as soon as possible to reserve your space. Final payment is due Sept. 1. E-mail Tricia Poland for information.

SILVERWOOD THEME PARK — Ticket prices are $20 for adults and $10 for youth (ages 3-7) and seniors (65 years and older). Send your check (cash will not be accepted) made payable to HERO to Linda Meigs (H3-12), Nancy Zeuge (X3-74), Cheri McGee (N2-53) or Marvene McChesney (T4-61). For amounts over $250, only a cashier's check will be accepted. Tickets can only be purchased through the mail, so make plans early. Allow two days turnaround. Once purchased, the tickets are valid anytime this year. The park is open seven days a week until September.

SPECIAL DISCOUNT — The Coeur d' Alene Resort is offering the following special rates for Aug. 25-28: $199 for a premier guestroom and $149 for a deluxe guestroom. If you take advantage of the special rate, you will receive a $50 per day food and beverage credit to your account. To make reservations, call the Coeur d' Alene Resort at (800) 688-5253 and ask for "The August Special."

HOLIDAY IN LIGHTS CRUISE — Dec.14-15, the cost is $105 ppdo. Come and join us for the "Holiday in Lights Show" cruise. The show features about 150 larger-than-life displays, many of which are animated, including a fire-breathing dragon, toy soldiers, dancing elves and a ship-jumping Santa. The show also includes a complete nativity scene. We will be staying at the Coeur d'Alene Resort. Room assignments are all subject to availability. We will leave the Federal Bldg parking lot at 8 a.m. and travel to the Valley Mall in Spokane for shopping. We will leave the mall at 3 p.m. and travel to Coeur 'd Alene for our 4 p.m. check-in at the resort. That evening we will cruise the lake. The trip also includes Sunday breakfast. We will leave the resort at noon and return to Richland. A $25 per person non-refundable deposit is required to reserve your space. The balance is due by the end of November. Only two buses will be going, so get your deposits in early. Contact Marvene McChesney at T4-61.

HERO SPONSORED CHRISTMAS PARTY — Dec. 20, WestCoast Hotel, Pasco. Music will be provided by "Men in the Making." Circle the date on your calendar. More information will follow in upcoming issues of the *Hanford Reach.*

UPCOMING TRIPS

- **Sights and Sounds of Ireland** — **LAST CALL** —14 days beginning Oct 19. The tour includes stops at Shannon, Connemara's marble factory, Belleek China factory, Giant's Causeway, Down Cathedral, Dublin and the Waterford Crystal factory and showrooms. Price of $2,095 pp includes accommodations in superior first class hotels and private homes (B&B accommodations), 12 full Irish breakfasts, one lunch at Rathbaun Farm and nine dinners including an Irish Ceili. Hotel taxes, service charges, tips for baggage handling and all local taxes are included. Passports are required. $250 is due now. The balance will be due Aug. 15. E-mail Marvene McChesney for complete itinerary. ✦

Features continued on next page.

VANPOOLS

Vanpool ads are run for two weeks. Ads must be resubmitted to run in subsequent issues of the *Hanford Reach*. The deadline for submission is Thursday, 10 days prior to publication.

Day and Zimmermann Protection Technology Hanford reminds employees to wear their badges. Vanpool and carpool drivers are responsible for ensuring their passengers are badged. If a passenger forgets his or her security badge, access is denied at the barricade. The individual is required to go to a badging station for a temporary badge or go home to retrieve the badge.

KENNEWICK

Van No. 123 to 200E, 8x9s shift. Safe, dependable and friendly. Current stops: 10th and Washington, Huntington Transit Station, Federal Building, 2101-M, B-Plant, 2704-HV and 2701-HV. Call **Eric** at 373-4497 (or at home 735-6755) or **Pat** at 373-3142. 8/5

RICHLAND

Vanpool No. 182 is seeking riders, 8x9s, 7 a.m. to 4:30 p.m. Leaves the 2440 Stevens Center parking lot at 6:15 p.m. Drops off at 2750-E and 2704-HV. Returns to 2440 Stevens Center at 5:05 p.m. Contact **David Braun** at 376-6510 or **William Cowles** at 376-4725. 8/5

8x9 vanpool to 200E needs a rider. Rate as low as $33.50 per month. Leaves former Hanford bus lot (across from 2440 Stevens) at 6:25 a.m. and drops off at 2750-E and MO-276 (behind 2750-E). Arrives at bus lot at 5 p.m. on Mondays through Thursdays and at 4 p.m. on Fridays worked. Contact **Dave Hedengren** at 373-5094. 8/5

Vanpool No. 119 will need riders and backup drivers. Ride in comfort knowing there are only two people per seat. Van leaves the Hanford Training Center at 6:10 a.m., and continues via Highway 240 to the Rattlesnake Barricade with current stops at 222-S, MO-279, WSCF and 2704-HV. Call **Patti** at 373-5637 or **Steve** at 376-6812. 8/12

Vanpool No. 117 has openings for 8x9 riders to locations within the 200W Area. Departs each morning at 6 a.m., near Densow's Pharmacy at 1019 Wright Ave. Stops include MO-412, 277-W (Fab Shops), MO-287, MO-278, MO-279, MO-556 near the Powerhouse intersection, T Plant and 272-WA, 278-WA, MO-281, MO-720, MO-437, MO-438 (due west of PFP). We return to Densow's about 5:10 p.m. Monday-Thursday and about 4:10 p.m. on Fridays. Contact **Gary Bush** at 372-2531 or via e-mail. 8/12

YAKIMA

Van from city of Yakima seeking one rider. Very comfortable ride with two people to a seat, 8x9s shift. Will consider rider from 200W or 200E. Leaves from park and ride at the Target store and East Valley Market park and ride. Call **Bill** at 373-5019 for more information. 8/12